## REMARKS

The Official Action of October 31, 2005, and the prior art applied therein have been carefully reviewed. The claims in the application remain as claims 1-13, and these claims define patentable subject matter warranting their allowance. Applicants accordingly respectfully request favorable reconsideration and allowance.

The Office Action says nothing about applicants' drawings being objected to. As such drawings have not been objected to, applicants understand that such drawings are acceptable, and applicants are proceeding in reliance thereof.

Applicants have claimed domestic priority from two earlier filed Provisional Applications. Acknowledgement by the PTO of applicants' rights in this regard as provided by 35 USC 119(e) would be appreciated.

Applicants' specification (i.e. the "disclosure") has been objected to, the Office Action indicating that in paragraph [0012] the terminology "an hydraulic" should instead read "a hydraulic". This objection is respectfully traversed.

Applicants believe that "an hydraulic" as originally stated in paragraph [0012] is grammatically correct. In support thereof, undersigned has conducted a short "Google" search for the wording "an hydraulic" and has recieved over

44,000 hits. A printout of the first page (results 1-10) is attached.

Nevertheless, applicants do not want to be recalcitrant over such a minor issue. Accordingly, if the Examiner remains adamant, applicants would be agreeable to the Examiner changing "an hydraulic" to "a hydraulic" by Examiner's amendment, upon allowance.

Applicants have amended the first paragraph of the specification to bring up to date that application 10/005,763 has matured to U.S. patent 6,669,546.

Claims 1 and 8 have been objected to because of use of the term "non-compressible".

While applicants believe that the term "non-compressible" is an acceptable term, e.g. note U.S. patent subclass 92, subclass 81, applicants have nevertheless amended claims 1 and 8 to use the term "incompressible" in place of "non-compressible". Clearly this is a cosmetic change with no change in scope made or intended.

Claims 1-13 have been rejected under the first paragraph of Section 112 as lacking enablement for the recitation in the claims of "killing microbes by way of shock wave treatment." This rejection is respectfully traversed.

With reference to the first paragraph of applicants' specification, and also paragraph [0006], it will be seen that application 10/005,763, now Long U.S. patent 6,669,546, has been "incorporated by reference." This patent provides support for "killing of bacteria in the meat" at column 1, line 14, and in the following paragraph and elsewhere as well. The sentence in column 1 of Long '546 under the heading "Field Of Invention", states as follows:

The present invention relates to the processing of meat for tenderization and/or the killing of bacteria in the meat, by subjecting the meat to shock waves...generated by capacitive discharge between two electrodes.

Applicants also respectfully note that (1) the killing of bacteria by shock wave treatment is in any event absolutely inherent, and (2) it is recited in applicants original claims which make it part of applicants original disclosure.

Withdrawal of the rejection is in order and is respectfully requested.

Claims 1 and 8 have been rejected under the second paragraph of Section 112 as being indefinite because they recite "approximately the same". This rejection is respectfully traversed.

 $<sup>^{1}</sup>$  E.g. see earlier Long patents, and applicants position is even supported by the relied upon Wesley patent.

First, merely because the term "approximately" appears in a claim does not make the clause in which it appears "indefinite". In this regard, attention is respectfully invited to MPEP 2173.05(b), part A. In addition to the case law cited therein, applicants further respectfully note Exparte Head, 214 USPQ 551, 553; Exparte Powell, 155 USPQ 104; and Exparte Shea, 171 USPQ 383.

Second, the PTO has already accepted that such terminology is not indefinite, attention being again invited to Long USP 6,669,546, the contents of which have been incorporated into the present application by reference, and noting especially the claims. In this regard, please note that claim 1 uses the identical language of "an acoustic impedance approximately the same...."

In this regard, attention is respectfully invited to Ex parte Brian et al, 118 USPQ 242, 245 (1958) where the Board, in reversing a rejection based on an alleged inadequate definition, stated as follows:

After careful consideration to all arguments presented, we are constrained to agree with appellants..., appellants here have referred to numerous patents dealing with the subject matter involved in the present case, which have been allowed on the basis of claims identifying the products [as claimed]. Since the claims under consideration are similar to those in the patents, we do not feel disposed to reject them and thus upset such a long established practice in

the particular art under consideration. Accordingly, we will not sustain the rejection... (emphasis added)

As in the Brian case, the terminology used in the present application is "similar" (indeed identical) to that in the patents, and thus should be accepted, i.e. the PTO should not "upset such a long established practice....".

Third, it should be understood that it is impossible or close to impossible to absolutely exactly match the acoustic impedance of the diaphragm with that of the incompressible fluid. To use claim language which could be interpreted as meaning an absolutely exact match (which in any event is unnecessary) would be to unduly, improperly and unfairly limit the claims in a way in which they need not be limited.

Moreover, applicants' specification gives good guidance to those skilled in the art. Water is disclosed as a preferred example of an incompressible fluid, and gum rubber and polyurethane are disclosed as examples of the membrane. One need only compare their respective acoustic impedances. Applicants' specification also notes that the media in question should be substantially transparent to the shock wave. The bottom line is that those skilled in the present art would well understand from applicants' disclosure that the acoustic impedances need not be exactly matched; but the closer the match, the better the results, all other factors being equal.

Lastly, if any experimentation were necessary (and applicants maintain that none is necessary), such experimentation would be routine, and this is fully permissible under \$112.

Withdrawal of the rejection is in order and respectfully requested.

Claims 1, 5, 8 and 9 have been rejected on the basis of obviousness-type double patenting over claims 1-35 of Long USP 6,669,546. This rejection is respectfully traversed.

Applicants respectfully ask the Examiner where in any of claims 1-35 of Long USP 6,669,546there is disclosed or called for the feature of the improvement clause of claim 1, namely "said meat is confined and tightly sealed within a tunnel while being subjected to said shock wave"? Respectfully there is none!

A main feature of the present invention, such as called for in the improvement clause of claim 1 as quoted above, is the provision of a tunnel within which the meat is confined and tightly sealed while being subjected to the shock wave. This is emphasized for example in the first sentence of paragraph [0007] as well as paragraphs [0010] and [0011], and elsewhere in applicants' specification.

There is nothing in the claims of Long '546 which would have suggested to a person of ordinary skill in the art

to process the meat within a tunnel. Long '546 discloses a type of conveyor system (column 10, commencing at line 4), and more preferably a rotary carousel conveyor as shown in Figs. 4 and 5 (column 12, commencing at line 58). Again, no tunnel is disclosed in the body of Long '546, and therefore certainly is not claimed in Long '546, nor is any tunnel system made obvious in either the Long '546 specification or claims.<sup>2</sup>

Another main feature of the present invention is set forth in the improvement clause of claim 8, namely "the diaphragm is located above the meat and the shock wave passes downwardly through the diaphragm and into the meat." This feature is brushed aside in the rejection as essentially being insignificant, the rejection stating that this claimed feature may be disregarded "because the invention of the patent can be rotated 180° and still perform the function of the invention, ...."

Whether or not such a statement in the rejection is correct is irrelevant, as the question is not whether something could be done, but whether or not it would have been obvious to do so. Applicants respectfully submit that there is nothing in the claims (or even the specification) of Long '546 which would have suggested to the person of ordinary skill in the art that

This is not to say that the claims of Long '546 do not dominate. As stated in MPEP 804, "Domination and double patenting should not be confused. ... Domination by itself ... cannot support a double patenting rejection. [citations omitted]."

"the invention of the patent can be rotated 180°". It would have been unobvious to do so as there is no suggestion to do so in the claims of Long '546.

Applicants respectfully note and rely on Ex parte Levengood, 28 USPQ 2d 1300-1301-1302 (BPAI 1993):

At best, the Examiner's comments regarding obviousness amount to an assertion that one of ordinary skill in the relevant art would have been able to arrive at appellant's invention because he had the necessary skill... This is an inappropriate standard for obviousness. [Citations Omitted] That which is within the capabilities of one skilled in the art is not synonymous with obviousness [Citations Omitted].

There is no basis for the conclusion in the rejection of the obviousness of features which are not shown in the claims (or even the specification) of Long '546.

Applicants understand the PTO's position to mean that what the applicants did is, in the examiner's view, a mere matter of choice which could be done by any person skilled in

 $<sup>^3</sup>$  Again, it is to be understood that obviousness is one thing and domination is another. As stated in MPEP 804, Part II:

Domination and double patenting should not be confused. They are two separate issues. One patent or application "dominates" a second patent or application when the first patent or application has a broader generic claim which fully encompasses or reads on an invention defined in a narrower or more specific claim in another patent or application. Domination by itself, i.e., in the absence of statutory or nonstatutory double patenting grounds, cannot support a double patenting rejection. [Citations omitted]

Thus, while the claims of Long '546 may indeed dominate the claims of the present application, they do not make the present claims obvious.

the art (if he or she wanted to do so). But see Ex parte Haas et al, 144 USPQ 98, 99:

The examiner ... says that [applicants' changes] are a matter of choice. It is not a matter of choice presented by the prior art [which] gives only one choice; ....

Also see Ex parte Deere, 118 USPQ 541 544; and Ex parte Krantz, 61 USPQ 238.

In an unpublished decision (September 30, 1986) in Appeal 580-81, the Board, in reversing a rejection in a case where the examiner had brushed aside a recitation appearing in the claim under appeal, concluded as follows:

The examiner's assertion at page 4 of the Answer that the proposed modification would have been "an obvious matter of engineering design choice well within the level of one of ordinary skill in the art" is a conclusion, rather than a reason.

Applicants respectfully submit that it is contrary to fact in the present case that what is claimed and not shown would require nothing more that an obvious modification; it is also contrary to the well established case law, including that cited above, which requires the prior art to show that alternatives are equivalent (see *In re Scott*, 139 USPQ 297; and *In re Flint*, 141 USPQ 299) before the PTO can validly hold that doing one in place of the other would simply have been obvious. There is no such prior art of record in the present case.

<sup>4</sup> The claims of Long '546, even if not "prior art", are treated as if they were prior art in a double patenting rejection.

For a more recent decision on this point, attention is respectfully invited to In re Chu, 36 USPQ2d 1089, 1095 (Fed Cir 1995). Also see In re Rijckaert, 28 USPQ2d 1955, 1957 (Fed Cir 1993). Applicants respectfully note that Long '546 has not been applied by itself against applicants' claims under Section 103, and applicants agree that applicants' claims would not have been obvious under Section 103 from Long '546.

The rejection also mentions the Wesley patent, although applicants note that Wesley is not actually made part of the rejection. (Applicants question whether Wesley is part of the rejection or is not part of the rejection.) Regardless, Wesley does not make obvious anything claimed by applicants and not disclosed or made obvious by Long '546 as discussed above.

Withdrawal of the rejection is in order and is respectfully requested.

Claims 1, 5, 8 and 9 have been rejected under Section 102 as anticipated by Wesley et al USP 3,594,115 (Wesley).

This rejection is respectfully traversed.

Wesley is a far cry from the present invention, i.e. respectfully, it is not even close to what is called for in applicants' claims, as pointed out below.

Claims 1 and 8 are the independent claims, so applicants focus on these relative to the Wesley disclosure.

First taking claim 1, the following recitation appears:

said meat is placed adjacent a first surface of a diaphragm having an acoustic impedance approximately the same as the acoustic impedance of said incompressible fluid, said incompressible fluid lying adjacent a second surface of said diaphragm, said diaphragm separating said meat from said incompressible fluid;....

no such feature is disclosed in Wesley. The closest Wesley comes is the Fig. 5 embodiment, which does indeed disclose a membrane or diaphragm 79 which "may be made of any suitable impervious, flexible, resilient substance such as rubber, plastics, metal and the like." There is no disclosure of such a diaphragm having an acoustic impedance approximately the same as the acoustic impedance of the incompressible fluid, as called for in all of claims 1, 5, 8 and 9, and such is not inherent, i.e. reasonably certain.

Claims 1 and 8 also each call for "movement of said meat [being] restricted when subjected to said shock wave passing through said incompressible fluid and then through said diaphragm and into said meat;...." This is not disclosed by Wesley. Thus, noting the first full paragraph at column 5 of Wesley, it is seen that the Fig. 5 embodiment is disclosed and taught for use in conjunction with a liquid food, such as milk. Chamber 75 is filled with milk. There is no disclosure of restricting the movement of meat.

Claim 1 is a Jepson claim, with the improvement clause appearing at the end of the claim being the focus, whereas the introductory paragraphs provide the environment. The improvement clause in claim 1 is that the meat is confined and tightly sealed within a tunnel while being subjected to the shock wave. Wesley not only discloses no treatment of meat, but also discloses no tunnel. It should be abundantly clear that Wesley does not anticipate claims 1 and 5.

Claim 8 shares the same introductory paragraphs as does claim 1. Wesley does not disclose the treatment of meat or the confinement of meat or a diaphragm having an acoustic impedance approximately the same as the acoustic impedance of the incompressible fluid. Wesley does not anticipate claims 8 and 9.

Claim 9 calls for apparatus for carrying out the method of claim 8, which apparatus includes "structure for restraining excessive movement of the meat when subjected to a shock wave passing through the incompressible fluid and then through said diaphragm and into the meat". Wesley does not disclose any such structure. The rejection says that "contacting the meat" is a method recitation, and may thus be ignored or brushed aside. Respectfully, this is not correct, as the structure recited is characterized by the language of

the recitation. There is no "restraining" structure capable of restraining meat which is disclosed in Wesley.

Moreover, it is also clear that Wesley does not disclose, either expressly or inherently, a diaphragm "having an acoustic impedance approximately the same as the first acoustic impedance", contrary to what is stated in the rejection. Not all plastics have an impedance approximately equal to the impedance of the incompressible fluid. Moreover, Wesley also says that the diaphragm may be made of metal. For a rejection under Section 102 to be based on inherency, such inherency must be reasonably certain, In re Brink, 164 USPQ 247, 249:

Absent a showing [by the PTO] of some reasonable certainty of inherency, the rejection...under 35 USC 102 must fail (emphasis added).

Also see Ex parte Cyba, 155 USPQ 756, 757 (1967), and In re Oelrich, 212 USPQ 323, 326 (1981). There is no reasonable certainty that any of the proposed membrane materials mentioned by Wesley would have an acoustic impedance approximately the same as that of the incompressible fluid, and indeed the broad mention of "metal" for example suggests the contrary. As inherency in the citation is neither inevitable nor reasonably certain, and indeed as it does not exist, it (inherency) cannot be relied upon by the PTO.

The rejection based on Wesley under Section 102 should be withdrawn, as Wesley does not disclose the claimed subject matter.

Claims 2-4, 6, 7 and 11 have been rejected as obvious under Section 103 from Wesley in view of Long et al USP 6,224,476 (Long '476). This rejection is respectfully traversed.

Wesley, as pointed out above, does not show or suggest what is recited in the improvement clause of claim 1, namely a method wherein "meat is confined and tightly sealed within a tunnel while being subjected to said shock wave."

Neither does Long '476. Therefore, even if the proposed combination were obvious, not admitted by applicants, the resultant reconstructed Wesley would still not reach the method of claim 1. As claims 2-4, 6 and 7 depend ultimately or directly from claim 1, they therefore incorporate the subject matter of claim 1, and would not have been made obvious from the proposed combination, even if such proposed combination were obvious, and even ignoring the dependent portions of such claims.

The rejection states that because "Wesley has already given motivation for proper reinforcement of the walls, it would have been obvious...to incorporate the metal walls of Long into the invention of Wesley,...." Even if that were

true, it would not have made obvious the method of claim 1, let alone the method of any of claims 2-4.

In the next paragraph of the rejection (bottom paragraph on page 8 of the Office Action), it is stated that because Long '476 teaches side walls of polyurethane, it would have been obvious to do so in Wesley. But this is directly contrary to what appears in the preceding paragraph, i.e. making the walls "sufficiently thick to withstand the shock wave and the high pressure." Respectfully, the rejection is based on applicants' own disclosure, not what would have been obvious to a person of ordinary skill in the art at the time the invention was made looking simply at Long '476 and Wesley.

Long '476 discloses pumping meat, e.g. ground meat, through a tubing having an acoustic impedance close to that of water. Wesley, in the Fig. 5 embodiment, discloses a method of treating a liquid food such as milk in a chamber having rigid walls. There is no guidance given in either reference as to how one of ordinary skill in the art might even begin to try to bring these disparate teachings together, and certainly nothing which would lead to applicants' invention.

As regards claim 11, neither of the references discloses the feature set forth in the dependent portion of claim 11, let alone in the claim 7 portion of claim 11.

Withdrawal of the rejection is in order and is respectfully requested.

Claim 10 has been rejected as obvious under Section 103 from Wesley in view of Long '476 and further in view of Hodges et al USP 4,135,002 (Hodges). This rejection is respectfully traversed.

The proposed combination of Wesley in view of Long '476 has been discussed above, where it has been pointed out that such a combination would not have been obvious; and, even if obvious, contrary to applicants' position, would not have resulted in the claimed subject matter. Hodges relates to a method of strip cutting raw potatoes, which has absolutely nothing to do with either the present invention, Wesley or Long '476. There would have been no motive or incentive, reason or purpose, and there is no teaching or suggestion, to incorporate the totally unrelated subject matter of Hodges into the device of Wesley. The only motive or incentive for doing so comes from applicants' own disclosure. As the Board stated in Exparte Levengood, supra;

The examiner notes that each reference discloses a different aspect of the claimed process.... The Examiner then indicates that because various aspects of the claimed process were individually known in the art, the modifications...[were] "well within the ordinary skill of the art at the time the claimed invention was made."

We reverse the rejection because the Examiner has used the wrong standard of obviousness. [Italics in original]

Thus, even if each of the individual references were to have shown all the features of claim 10, which they do not, there is still no teaching that the person of ordinary skill in the art of Wesley, or of Long '476 would have even been charged with knowledge of Hodges, let alone would have the motive or incentive for abstracting something completely unrelated from Hodges into Wesley.

The Board in Levengood then proceeded from the quotation given above as follows:

facie case of obviousness, it is necessary for the Examiner to present evidence, preferably in the form of some teaching, suggestion, incentive or inference in the applied prior art, or in the form of generally available knowledge, that one having ordinary skill in the art would have been led to combine the relevant teachings of the applied references in the proposed manner to arrive at the claimed invention. [citations omitted; italics in original]

The references simply do not lead the person of ordinary skill in the art to the subject matter of claim 10.

Withdrawal of the rejection is in order and is respectfully requested.

Claim 11 has been rejected as obvious under Section 103 from Wesley in view of Long '476 and further in view of Long '546. This rejection is respectfully traversed.

Claim 11 depends from and incorporates the subject matter of claim 7, which in turn incorporates the subject matter of claim 4, which incorporates the subject matter of claim 1. The proposed combination of Wesley in view of Long '476, even if such combination were obvious, respectfully denied by applicants for the reasons pointed out above, would still not have reached even the subject matter of claim 1, let alone that of dependent claim 11. The fact that Long '546 does indeed disclose subject matter similar to that which is recited in the dependent portion of claim 11 still does not make up for the deficiencies of the proposed combination as pointed out above.

Moreover, the dependent portion of claim 11 cannot be considered in a vacuum; it exists in a particular environment, namely the environment recited in claim 1, and that particular environment is not made obvious by the prior art.

Withdrawal of the rejection is in order and is respectfully requested.

Claims 12 and 13 have been rejected as obvious under Section 103 from Wesley in view of Long '546. This rejection is respectfully traversed.

Claims 12 and 13 are apparatus claims and were incorrectly made dependent from method claim 8, whereas they should have been dependent directly or ultimately from claim 9. Claim 12 has accordingly now been amended to make it depend from claim 9. It has been pointed out above that the claim 9 portions of claims 12 and 13 is not shown or made obvious by Wesley.

Long '546 has not been cited to make up for the deficiencies of Wesley as pointed out above, and indeed does not do so. Therefore, even if the proposed combination were obvious, respectfully denied by applicants, the modified Wesley (reconstructed in view of Long '546) would not reach the claimed subject matter.

Withdrawal of the rejection is in order and is respectfully requested.

The prior art documents cited, but not applied by the PTO, have been noted, along with the implication that such documents are deemed by the PTO to be insufficiently material to warrant their application against any of applicants' claims.

Applicants believe that all issues raised in the Official Action have been addressed above in a manner which should lead to patentability of applicants' claims.

Accordingly, applicants respectfully request favorable reconsideration and allowance.

Respectfully submitted,

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